Claims:

1. An unmanned system for investigating underwater regions, comprising:

a plurality of unmanned underwater vehicles (UUVs), each of said plurality of UUVs including propulsion and navigation means for traversing an underwater region, sonar means for generating sonar data associated with the underwater region, electro-optic imaging means for generating image data of selected areas of the underwater region, and underwater communication means for transmitting said sonar data and said image data through the water;

an unmanned mothership equipped for navigation through the water, said unmanned mothership including, in modular form, a first module for controlling navigation of said unmanned mothership, a second module for receiving and storing said sonar data and said image data transmitted through the water from each of said plurality of UUVs, a third module for storing and dispensing fuel, a fourth module for propelling said unmanned mothership using said fuel from said third module and steering said unmanned mothership in accordance with instructions received from said first module, and a fifth module coupled to said second module for wirelessly transmitting said sonar data and said image data;

docking means mounted partially onboard said unmanned

mothership and partially onboard each of said plurality of UUVs for coupling each of said plurality of UUVs to said unmanned mothership, and for selectively releasing each of said plurality of UUVs from said unmanned mothership into the underwater region; and

guidance means mounted partially onboard said unmanned mothership and partially onboard each of said plurality of UUVs for guiding each of said plurality of UUVs back to said docking means from positions in the water, wherein said unmanned mothership transports said plurality of UUVs to and from the vicinity of the underwater region, releases said plurality of UUVs into the water, and facilitates recovery of said plurality of UUVs from the water.

2. An unmanned system as in claim 1 wherein said underwater communication means includes means for receiving underwater acoustic transmissions, and wherein said unmanned mothership further includes:

a GPS system having an antenna for receiving GPS signals, said GPS system determining a position of said unmanned mothership using said GPS signals; and

an acoustic transmitter coupled to said GPS system for transmitting an acoustic signal into the water that is indicative of said position so-determined, wherein said

acoustic signal is received by said underwater communication means for use by said propulsion and navigation means.

3. An unmanned system as in claim 1 wherein said first module includes a radio receiver for receiving navigation instructions for said unmanned mothership over the airwaves from a remote location.

4. An unmanned system as in claim 1 wherein said first module comprises a pre-programmed navigation system for directing said unmanned mothership along a predetermined route.

5. An unmanned system as in claim 1 wherein said propulsion and navigation means includes at least one rechargeable battery, said unmanned system further comprising battery charging means for recharging said at least one rechargeable battery, said battery charging means having a first portion that is mounted onboard said unmanned mothership and a second portion that is mounted on each of said plurality of UUVs,

said first portion having a ferromagnetic material formed into a nearly continuous loop wherein a gap is formed between two opposing surfaces of said ferromagnetic material that defines the ends of said nearly continuous loop with said gap being submerged in the water, a first electric conductor coiled about a portion of said ferromagnetic material that is formed into said nearly continuous loop at a region thereof opposing said gap, and an AC power source coupled to said first electric conductor for applying an AC voltage thereto,

said second portion having a block of said ferromagnetic material sized to loosely fit in said gap while being spaced apart from each of said opposing surfaces, a second electric conductor coiled about a portion of said block wherein said AC voltage applied to said first electric conductor induces an electric current in said second electric conductor when said block is positioned in said gap, means

for positioning said block in said gap, and means coupled to said first electric conductor and said at least one rechargeable battery for utilizing said electric current to recharge said at lest one rechargeable battery, and

said first portion further having means for keeping said block spaced apart from said opposing surfaces when said block is fitted in said gap.

6. An unmanned system as in claim 5 wherein said means for keeping is a sleeve positioned in said gap.

7. An unmanned system as in claim 5 wherein said means for keeping is an electrically insulating material interposed between each of said opposing surfaces and said block.

8. An unmanned system as in claim 7 wherein said electrically insulating material is selected from the group consisting of rubber, nylon, plastic and glass.

9. An unmanned system as in claim 5 wherein said ferromagnetic material is iron.

10. An unmanned system for investigating underwater regions, comprising:

a plurality of unmanned underwater vehicles (UUVs), each of said plurality of UUVs being (i) powered by at least one rechargeable battery, and (ii) equipped to traverse an underwater region, generate sonar data associated with the underwater region, generate image data of selected areas of the underwater region, and transmit said sonar data and said image data through the water;

an unmanned mothership equipped to (i) navigate through the water, (ii) receive and store said sonar data and said image data from each of said plurality of UUVs, and (iii) wirelessly transmit aid sonar data and said image data from said unmanned mothership;

battery charging means for recharging said at least one rechargeable battery, said battery charging means having a first portion that is mounted onboard said unmanned mothership and a second portion that is mounted on each of said plurality of UUVs,

said first portion having (i) a ferromagnetic material formed into a nearly continuous loop wherein a gap is formed between two opposing surfaces of said ferromagnetic material that defines the ends of said nearly continuous loop with said gap being submerged in the water, (ii) a first electric

conductor coiled about a portion of said ferromagnetic material that is formed into said nearly continuous loop at a region thereof opposing said gap, and (iii) an AC power source coupled to said first electric conductor for applying an AC voltage thereto,

said second portion having (i) a block of said ferromagnetic material sized to loosely fit in said gap while being spaced apart from each of said opposing surfaces, (ii) a second electric conductor coiled about a portion of said block wherein said AC voltage applied to said first electric conductor induces an electric current in said second electric conductor when said block is positioned in said gap, (iii) means for positioning said block in said gap, and (iv) means coupled to said first electric conductor and said at least one rechargeable battery for utilizing said electric current to recharge said at least one rechargeable battery, and

said first portion further having means for keeping said block spaced apart from said opposing surfaces when said block is fitted in said gap;

docking means mounted partially onboard said unmanned mothership and partially onboard each of said plurality of UUVs for coupling each of said plurality of UUVs to said unmanned mothership, and for selectively releasing each of said plurality of UUVs from said unmanned mothership into the

underwater region; and

guidance means mounted partially onboard said unmanned mothership and partially onboard each of said plurality of UUVs for guiding each of said plurality of UUVs back to said docking means from positions in the water, wherein said unmanned mothership transports said plurality of UUVs to and from the vicinity of the underwater region, releases said plurality of UUVs into the water, and facilitates recovery of said plurality of UUVs from the water.

11. An unmanned system as in claim 10 wherein each of said plurality of UUVs is further equipped to receive underwater acoustic transmissions, and wherein said unmanned mothership is further equipped to (i) receive GPS signals, (ii) determine a position of said unmanned mothership using said GPS signals, and (iii) transmit an acoustic signal into the water that is indicative of said position so-determined, wherein said acoustic signal is received by each of said plurality of UUVs for use in traversing the underwater region.

12. An unmanned system as in claim 10 wherein said unmanned mothership is further equipped to receive navigation instructions for said unmanned mothership over the airwaves

from a remote location.

13. An unmanned system as in claim 10 wherein said unmanned mothership is further equipped to direct said unmanned mothership along a predetermined route.

14. An unmanned system as in claim 10 wherein said means for keeping is a sleeve positioned in said gap.

15. An unmanned system as in claim 10 wherein said means for keeping is an electrically insulating material interposed between each of said opposing surfaces and said block.

16. An unmanned system as in claim 15 wherein said electrically insulating material is selected from the group consisting of rubber, nylon, plastic and glass.

17. An unmanned system as in claim 10 wherein said ferromagnetic material is iron.